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EXAMINER	
TANG, KENNETH	
ART UNIT	**PAPER NUMBER**
2195	

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/879,099	SAINOMOTO ET AL.	
	Examiner	Art Unit	
	Kenneth Tang	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 December 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the Amendment filed on 12/23/04. Applicant's arguments have been fully considered but were not found to be persuasive.

2. Claims 1-27 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 23 and 25-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The following is indefinite:

i. In claim 23, "A data frame reception method according to claim 21, wherein said step of executing processing of the receiving data frame stored line information inserted into the received data frame." is indefinite because it is not made clear what the limitation is due to being grammatically incorrect and not understandable.

ii. In claim 25, "A data frame distribution method according to claim 24, wherein the step of inserting is further insert next transmission line number to the data frame." is indefinite because it is not made clear what the limitation is due to being grammatically incorrect and not understandable.

iii. In claim 26, "transmission/reception" is indefinite because it is unclear whether this refers to "either transmission or reception" or "transmission and reception". The notation '/' generally indicates either or. However, the claim language implies an "and" relationship. In addition, "transmitted/received to/from at least the two communication lines in a distributed manner" is indefinite for the same reasons.

b. The following lacks antecedent basis:

iv. Claim 25, "transmission line number", line 2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fernstrom (US 5,550,827) in view of Jurkevich (US 5,420,857).

5. As to claim 1, Fernstrom teaches a data frame distribution method wherein either one of at least two information processing apparatus *(Fig. 1, item 1)* interconnected by at least two communication lines distributes and transmits *(Fig. 1, items 7 and 9)* data frames across said at least the two communication lines to effect transmission of the data frames from the one

information processing apparatus to the other information processing apparatus, the method comprising the steps of:

storing for each communication line of said at least two communication lines a count of the number of data frames transmitted to said communication line *(Fig. 2, items 15 and 19)*;

generating a data frame to be transmitted *(col. 1, lines 61-67, col. 3, lines 30-50, Abstract)*;

comparing the stored counts of the number of data frames for said at least two communication lines with each other *(col. 9, lines 19-29)*;

transmitting the generated data frame to the selected communication line *(col. 1, lines 61-62)*.

6. Fernstrom fails to explicitly teach selecting a communication line having the smallest stored amount of data frames. However, Jurkevich teaches selecting from a plurality of communication lines based on the best choice based on line status and bandwidth availability (smallest stored amount of data frames). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include this feature of selecting a communication line having the smallest amount of data frames to the existing system and method of Fernstrom because choosing the best choice of an output line would increase the speed of transmission *(col. 19, lines 52-64)*. It is inherent that in order to determine the amount of data frames, the data frames need to be counted because it cannot occur without it.

7. As to claim 2, Fernstrom teaches wherein said count is an indication of a cumulative value of the number of bytes of data frames transmitted said communication line *(col. 3, lines 44-59)*.

8. As to claim 3, Fernstrom teaches wherein said count is an indication of a cumulative value of the number of data frames transmitted to each of at least the two communication lines, as the amount of data frames *(col. 3, lines 44-59)*.

9. As to claim 4, Fernstrom teaches wherein said transmitting step further includes a step of adding a count of the generated data frame to the amount of data frames stored for the selected communication line *(col. 2, lines 21-26, and col. 3, lines 40-42)*.

10. As to claim 5, it is rejected for the same reasons as stated in the rejection of claim 1. In addition, Fernstrom teaches storing line information of either one of at least the two communication lines *(col. 5, lines 18-37 and 48-67)* and adding a count of the generated data frame to the count of data frames stored for the communication line corresponding to the stored line information, and storing an addition result *(col. 4, lines 20-22, col. 2, lines 21-26, and col. 3, lines 40-42)*.

11. As to claim 6, it is rejected for the same reasons as stated in the rejection of claims 1 and 5.

12. As to claim 7, it is rejected for the same reasons as stated in the rejection of claim 2.

13. As to claim 8, it is rejected for the same reasons as stated in the rejection of claim 1. In addition, Fernstrom teaches a transmitting and receiving unit *(Fig. 2, see Abstract)*.

14. **Claims 9-16 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fernstrom (US 5,550,827) in view of Jurkevich (US 5,420,857), and further in view of Morita et al. (hereinafter Morita) (US 6,389,041 B1).**

15. As to claim 9, it is rejected for the same reasons as stated in the rejection of claims 1 and 8. In addition, Fernstrom teaches checking to make sure that the received data packet has the correct structure and the correct order *(col. 9, lines 19-29)* but fails to explicitly teach counting the number of data frames transmitted at least the two communication lines and inserting the counted value in the generated data frame. However, Morita teaches receiving a data frame transmitted, comparing the byte counts of the frames, and counting the number of data frames (transmitted byte count counter) received from either one of at least the two communication lines and processed *(col. 45, lines 54-67, col. 46, lines 1-20, col. 51, lines 40-49)*. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of counting the number of data frames transmitted at least the two communication lines and inserting the counted value in the generated data frame to the existing system in order to

provide synchronization between multisystems *(col. 1, lines 6-16 and lines 59-65, col. 45, lines 54-67, col. 46, lines 1-20, col. 51, lines 40-49)*.

16. As to claim 10, Morita teaches wherein said inserting step further counts up the counted value and inserts the count-up count in the data frame as the order information *(col. 45, lines 54-67, col. 46, lines 1-20, col. 51, lines 40-49)*.

17. As to claim 11, it is rejected for the same reasons as stated in the rejection of claim 2.

18. As to claim 12, it is rejected for the same reasons as stated in the rejection of claim 8. In addition, Fernstrom teaches comparing the order information inserted into the received data frame with the counted value; and if the order information is coincident with the counted value, executing processing of the received data frame *(col. 9, lines 19-45)*.

19. As to claim 13, Fernstrom teaches wherein if the order information is not coincident with the counted value, said comparing step compares the order information inserted into another data frame received from either one of at least the two communication lines with the counted value *(col. 9, lines 19-45)*.

20. As to claim 14, Fernstrom teaches wherein the order information inserted into all received data frames is not coincident with the counted value, said comparing step suspends

processing until another data frame is received from either one of at least the two communication lines *(col. 9, lines 26-29)*.

21. As to claim 15, it is rejected for the same reasons as stated in the rejection of claim 10.

22. As to claim 16, Fernstrom teaches wherein said step of executing processing of the received data frame includes a step of deleting the order information inserted into the received data frame *(claim 8)*.

23. As to claim 21, it is rejected for the same reasons as stated in the rejection of claim 5. In addition, Fernstrom teaches judging (checking to see if received data packet has a correct structure and have the correct order) whether the data frame was received from the communication line corresponding to the stored line information and the data frame is received from the communication line corresponding to the stored line information, executing processing of the received data frame *(col. 9, lines 19-45)*.

24. As to claim 22, it is rejected for the same reasons as stated in the rejection of claim 14.

25. As to claim 23, Fernstrom teaches wherein said step of executing processing of the receiving data frame stored line information inserted into the received data frame *(col. 9, lines 30-45)*.

26. **Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fernstrom (US 5,550,827) in view of Morita et al. (hereinafter Morita) (US 6,389,041 B1).**

27. As to claim 17, Fernstrom teaches a data frame reception method of receiving data frames transmitted from either one of at least two information processing apparatuses interconnected by at least two communication lines, via either one of at least the two communication lines to effect transmission of the data frames from the one information processing apparatus to the other information processing apparatus, the method comprising the steps of:

receiving a data frame transmitted from either one of at least the two communication lines *(col. 4, lines 20-23)*;

comparing order information inserted into the received data frame with the counted value *(col. 9, lines 19-45)*; and

if the order information is coincident with the counted value, executing processing of the received data frame *(col. 9, lines 19-45)*.

28. Fernstrom fails to explicitly teach counting the number of data frames received from said at least the two communication lines and processed, and storing the counted value. However, Morita teaches receiving a data frame transmitted, comparing the byte counts of the frames, and counting the number of data frames (transmitted byte count counter) received from either one of at least the two communication lines and processed *(col. 45, lines 54-67, col. 46, lines 1-20, col. 51, lines 40-49)*. It would have been obvious to one of ordinary skill in the art at the time the

invention was made to include the feature of counting the number of data frames from the communication lines in order to provide synchronization between multisystems *(col. 1, lines 6-16 and lines 59-65)*.

29. As to claim 18, Fernstrom teaches a wherein if the order information is not coincident with the counted value, said comparing step compares the order information inserted into another data frame received from either one of at least the two communication lines with the counted value *(col. 9, lines 19-45)*.

30. As to claims 19-20, they are rejected for the same reasons as stated in the rejection of claims 14 and 20.

31. **Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fernstrom (US 5,550,827) in view of Jurkevich (US 5,420,857), and further in view of Yoneda (US 6,609,251 B1).**

32. As to claim 24, it is rejected for the same reasons as stated in the rejection of claim 1. Except, Fernstrom and Jurkevich fail to explicitly teach inserting order information and transmitting the data frame based on the order information inserted. However, Yoneda teaches adding the order information for transferring and receiving packets and transferring and receiving them based on that order *(col. 1, lines 49-60)*. It would have been obvious to one of

ordinary skill in the art at the time the invention was made to include the feature of adding the order information for transferring and receiving packets and transferring and receiving them based on that order to the existing data packet transfer system of Fernstrom and Jurkevich because this would allow for higher efficiency and precision in data communication *(col. 1, lines 52-54)*.

33. As to claim 25, Yoneda teaches wherein the step of inserting is further insert next transmission line number to the data frame. It is inherent that there is a next transmission to be performed because there is a plurality of transmissions. That is why there is an order of transmission established for them.

34. As to claims 26-27, they are rejected for the same reasons as stated in the rejection of claims 24-25.

Response to Arguments

35. The 35 USC 112, 2nd rejection was not traversed nor even addressed in the Remarks on 12/23/04. The claim language is grammatically incorrect, unclear and does not make any sense.

36. During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once

issued, will be interpreted more broadly than is justified. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). The rejection of claim 1 contains a detailed mapping of each element in the claim with its equivalent component taught in the prior art references. Applicant argues (claim 1) that Fernstrom does not teach counting the data frames. The Examiner respectfully disagrees. It is inherent that in order to determine the amount of data frames as in Fernstrom, the data frames need to be counted. The aforementioned claim elements are clearly subject to a broad interpretation, as detailed in the rejections maintained above. The Examiner has a *duty* and *responsibility* to the public and to Applicant to interpret the claims *as broadly as reasonably possible* during prosecution (see *In re Prater, 56 CCPA 1381, 415F.2d 1393, 162 USPQ 541 (1969)*).

37. Applicant fails to address and refute the cited portions of the references by the Examiner. Instead, the Applicant states the portions of the cited references that are not related to the claimed invention and further fails to provide support for it. Applicant's arguments have been fully considered but were not found to be persuasive.

38. Applicant argues on page 17 that Fernstrom teaches a pair of terminal 1 and a node 3, 5 or a node 3 and another node 5 would appear to correspond to the at least two information processing apparatuses recited in the claims. However, the similarities between the claims end at this point and there are features not taught by Fernstrom. For example, Fernstrom does not teach or suggest that data frames are distributed across a plurality of links which connect the terminal 1 and the node 3, 5 as in the present invention.

In response, the Examiner respectfully disagrees. Fernstrom discloses that packets are being transferred between various terminal stations in the network *(col. 2, lines 1-13)*. The node 3 and 5, given its broadest reasonable interpretation, can be terminal stations.

39. Applicant argues on page 17 that Fernstrom does not teach data frames transmistted across at least two communication lines is monitored and stored.

In response, the Examiner respectfully disagrees. Fernstrom discloses that packets are being transferred between various terminal stations in the network *(col. 2, lines 1-13)*. The node 3 and 5, given its broadest reasonable interpretation, can be terminal stations. In addition, the terminal stations transfer packets according to monitored factors *(col. 2, lines 41-44)*.

40. Applicant argues on pages 17-18 that Fernstrom does not teach counting and a comparison with respect to each communication line of the at least two communication lines, and then a selection based on the smallest counts.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Jurkevich teaches selecting (comparing before selecting is inherent because comparing needs to be performed so that it is known what to select) from a plurality of communication lines based on the best choice based on line status and bandwidth availability (smallest stored amount of data frames). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include this feature of selecting a communication line having the smallest amount of data frames to the existing system and method of Fernstrom because choosing the best choice of an output line would increase the speed of transmission *(col. 19, lines 52-64)*. It is inherent that in order to determine the amount of data frames, the data frames need to be counted because it cannot occur without it.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kt
4/9/05

LEWIS A. BULLOCK, JR.
PRIMARY EXAMINER